



**RANGER
PUMPS**

Ranger, Inc.

**Manufacturer
of precision helical gear pumps
for a wide range of
industrial applications**

Made in the USA

Four series of versatile helical gear pumps for moving both low and high viscosity liquids

RANGER PUMP FEATURES

SMOOTH OPERATING HELICAL GEARS

- Heat treated ductile iron helical gears provide silent, efficient long service life.
- Finely keyed and machined gears are easily replaced by sliding on and off the mainshaft.
- Friction and vibration are kept at a minimum by careful machining of the meshing helical gears.

EXTENDED-LIFE WEARING SERVICES

- High lead bronze, iron or carbon bearings are available.
- Pumping gears are supported by four heavy duty sleeve bearings to prolong service life.
- Special machined grooves in the bearings allow both circulation and

lubrication for lower bearing temperatures.

- Special outboard drive shaft bearing absorbs thrust loads and helps support external radial loads.

PRECISION GROUND SHAFTS

- Induction hardened bearing and packing surfaces on precision ground steel shafts extend pump life.
- Hardened stainless steel shafts are available for specific installations.

RUGGED CAST-IRON CASTINGS

- Maximum pumping efficiency is gained from quality castings machined to high tolerances.
- Positive alignment of the faceplate case and backplate is insured by large hardened steel dowel pins.



SERIES 11

This series of Ranger pumps are designed to output .11 gallons per revolution at a maximum of 750 rpm and generate up to 80 gallons per minute. These pumps are offered in a 90°, 2" NPT tapped port model and a 180° model with 2" flanges.



SERIES 17

This series of Ranger pumps are designed to output .17 gallons per revolution at a maximum of 750 rpm and generate up to 126 gallons per minute in a 90° model with 2" or 2.5" flanges and a 90° model with 2" NPT tapped ports.



SERIES 22

This series of Ranger pumps are designed to output .22 gallons per revolution at a maximum of 750 rpm and generate up to 165 gallons per minute. These pumps are offered in 90° and 180° with 3" and 4" flanges.



SERIES 48

This series of Ranger pumps are designed to output .52 gallons per revolution at a maximum of 900 rpm and generate up to 460 gallons per minute. These pumps are offered in a 90° model with 3" or 4" flanges.

Pump Identification Guide

HB - Outboard bearing
HH - Pump with hydraulic adaptor and rigid coupling
BH - Replacement pump for HH Pump without adaptor
GO - Replacement pump for GHB unit without gear reduction
GB - Pump with gear reduction

C - Carbon graphite bearing
X - or no letter bronze bearing
T - TFE & graphite bearing
I - Iron Bearing
H - Hi Temperature bronze bearing

MECHANICAL SEAL PUMP

B - Buna-N
V - Viton™
T - Teflon™

PACKING PUMP

G - TFE & graphite packing
LG - Lip seal with graphite packing
X - or no letter - standard packing
T - Pure TFE packing
D - DSA 8093 packing
LD - Lip seal with DSA packing

9 - Ports 90°
8 - Ports 180°

DB - Double relief valve
RV - Relief valve
No letter - No relief valve

SS - Stainless steel shafts
No letter or XX - Steel shafts

P - Packing
M - Mechanical Seal

F - Flanges
No letter - Pipe port

Rotation & Shaft position (See Installation Manual pg. 4)
No letter - W position (See Installation Manual pg. 4)

11 - .11 Gallons per rev.
17 - .17 Gallons per rev.
22 - .22 Gallons per rev.
48 - .48 Gallons per rev.

229PHBFRVLX-SSCG



SERIES 11
180° Ported Housing

Ranger now offers the 11 series with 180° ports and 2" NPT flanges. This is a good choice when your plumbing does not accommodate the 90° port model. It is available with the standard RV, Double RV and plain endplate. It is also available with the HB, HH and GB models.



Bi-Rotational Double
Relief Valve

Ranger now offers a double relief valve for our series 11, 17 and 22 that will provide protection in both shaft rotations. The double relief will continue to protect from overpressure even when the shaft rotation is changed and the pumps flow is reversed. The double relief is field adjustable and works similar to the standard RV.



SERIES 48
Gear Reduction

Ranger now offers an integrated gear reduction unit for the 48 series. It is available in a 4.26:1, 4.88:1 and 5.66:1 ratio. Please refer to page 7 for additional information.

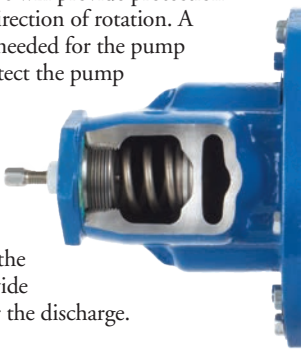
Ranger pumps can be engineered for

Blending • Mixing • Transfer • Solvents • Molasses
Gasoline • Resins • Oil • Asphalt • Chemicals

Field Adjustable Relief Valve

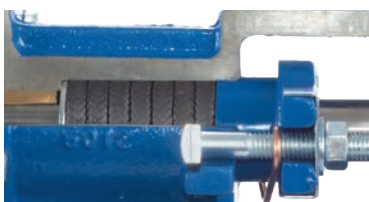
The relief valve will provide protection in only one direction of rotation. A relief valve is needed for the pump system to protect the pump from over-pressures.

The valves can be positioned to either side of the pump to provide protection for the discharge.



*See Installation, Operation and Maintenance manual for details.

Stuffing Box



Ranger pumps can be supplied as standard with stuffing box. They can be easily converted from packing to a lip seal or mechanical seal. Several types of packing are available for various applications: for example - high temperatures.

Lip Seal Design



Ranger pumps can be supplied with a combination lipseal and back-up packing as shown above. This can be easily converted from the lipseal combination to packing only or a mechanical seal.

Mechanical Seal



Ranger pumps can be supplied as standard with a single mechanical seal. They can be easily converted from a mechanical seal to packing or lipseal. Several types of seals are available (Buna-N, Viton™ and Teflon™) for various applications, for example: high temperatures or corrosive conditions. Contact Ranger for application assistance.

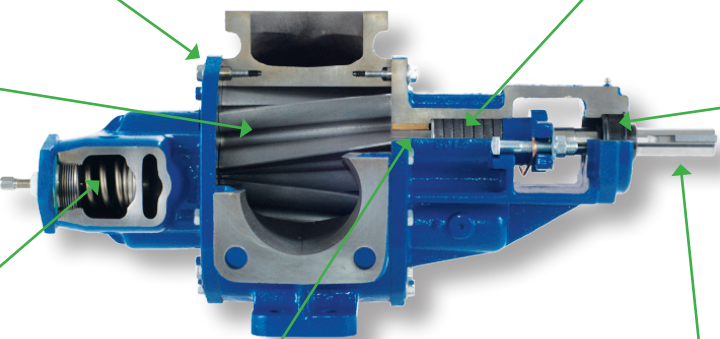
Standard Fitted Materials of Construction

PART	STANDARD MATERIALS	OPTIONS
Housing & Backplates	ASTM A48 Class 30 Cast Iron	
Gears	Ductile Iron	
Shafts	Carbon Steel	440 Stainless Steel
Bearing Bushings	Bronze	Carbon, Iron, TFE/Graphite
R.V. Parts	Carbon Steel	Stainless Steel
Gaskets	Fiber	Aluminum
Hardware	Zinc Plated Steel	

Maximum Pump Ratings

125 PSI (862 KPA) maximum inlet and discharge pressure
750 RPM maximum for 11, 17 & 22 series. <i>(See speed vs. viscosity curve for maximum RPM).</i>
900 RPM maximum for 48 series. <i>(See speed vs. viscosity curve for maximum RPM).</i>
350°F (177°C) maximum temperature for standard packing.
500°F (260°C) Maximum temperature for TFE/Graphite
212°F(100°C) maximum temperature for BUNA-N mechanical seal
400°F (204°C) maximum temperature for Viton mechanical seal

Key Components



Pumps come standard with fiber case gaskets (*Max 230°F/110°C). For temperature up to 450°F/232°C, we offer optional aluminum gaskets.

Various types of seals are available including packing, lip seals or mechanical seals.

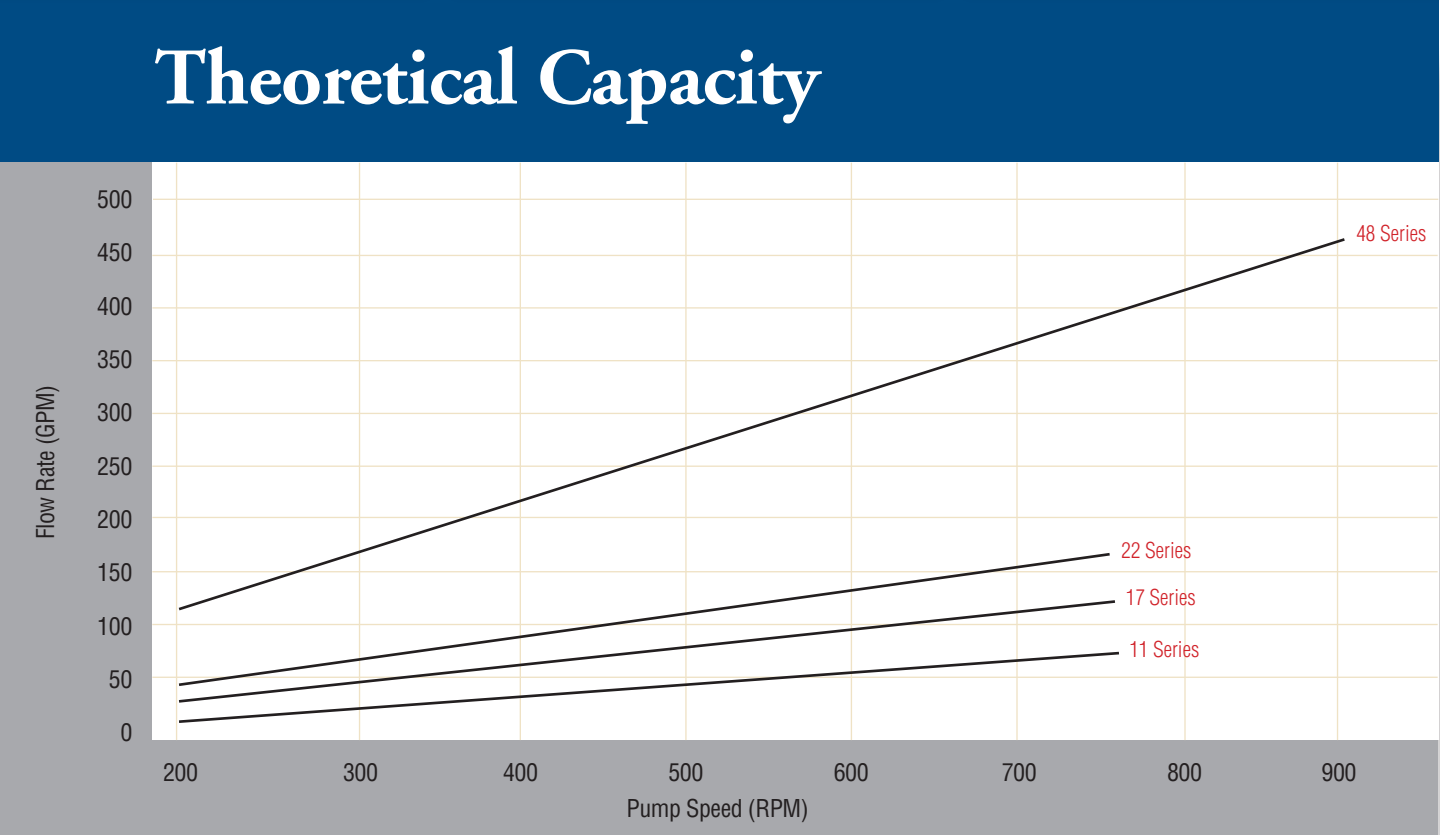
Heat treated ductile Iron gears are accurately machined for quiet, efficient operation and long life.

Carbon steel relief valve springs come standard or optional stainless steel spring. Various springs are available for a wide range of operation duties.

Four heavy duty sleeve bearings give positive support to pumping gears and ensure long, efficient service.

The steel shafts are induction hardened in the bearing and packing areas and are precision ground to exacting standards for maximum life. Hardened stainless steel shafts are available.

A large outboard bearing is furnished on all HB model pumps that support the drive shaft on applications with side loads.



Close-coupled gear reduction option



This series of Ranger pumps is designed to operate at reduced motor speeds. This allows the pump to operate equally well for both high and low viscosity liquids. Low pump speeds also increase pump life. Ranger gear boxes are self contained with oil lubricated anti-friction bearings and hardened steel gears standard for maximum service life. A common gear box has three interchangeable gear ratios that fit

the 11, 17 and 22 Series pumps.

The charts on this page are intended as a guide only. All application factors including temperature, liquid characteristics and inlet conditions must be considered to select the correct pump and reduction speed. Speeds shown for the 48 Series are for reference only, contact Ranger Pumps for more information.

Gear Ratios for GB Units				
Series	Motor RPM	Gear Ratio	Pump RPM	Maximum Permissible HP
11-22	1150	4.60:1	250	5.5
		3.94:1	290	6.5
		3.20:1	360	8.0
	1750	4.60:1	380	8.5
NEW 48	1150	3.94:1	445	10.0
		3.20:1	545	10.0
		4.60:1	750	10.0
	1750	5.66:1	203	8.5
		4.88:1	235	10.0
		4.26:1	270	11.0
	3450*	5.66:1	309	13.0
		4.88:1	360	15.0
		4.26:1	410	15.0
	3450*	5.66:1	609	15.0

Note: Do not exceed maximum allowable HP shown. Series 11 - .11 gallons per revolution, Series 17 - .17 gallons per revolution, Series 22 - .22 gallons per revolution, Series 48 - .52 gallons per revolution. *3450 RPM motors are used in handling low viscosity lubricating liquids.

Construction Advantages
Positive shaft and gear support with four internal bearings
Dowel pins insure positive pump alignment
Hardened gears and shafts for long service life
Integral speed reducer available as option
Field adjustable relief valve available
Fabrication options include Base, Coupling and Drives

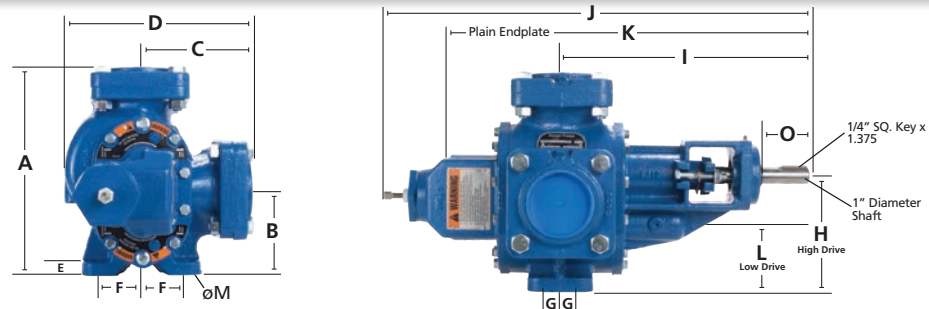
Typical Liquids/Viscosity List

30 to 100	100 to 250	250 to 800	800 to 2,500	2,500 to 8,000	8,000 to 25,000	25,000 to 75,000	75,000 to 300,000
- Alcohols - Gasoline - Turpentine	- SAE #5 Oil - Corn Oil - Olive Oil	- SAE #10 Oil - Soybean Oil - Light Crude	- SAE #20-30 Oil - Paint Primer - Spar Varnish	- SAE #40 Oil - Heavy Turbine Oil - Enamel Paint	- SAE #50 Oil - Ink - Heavy Crude	- Asphalt - Shampoo - Gear Lube	- Tar - Molasses - Chocolate

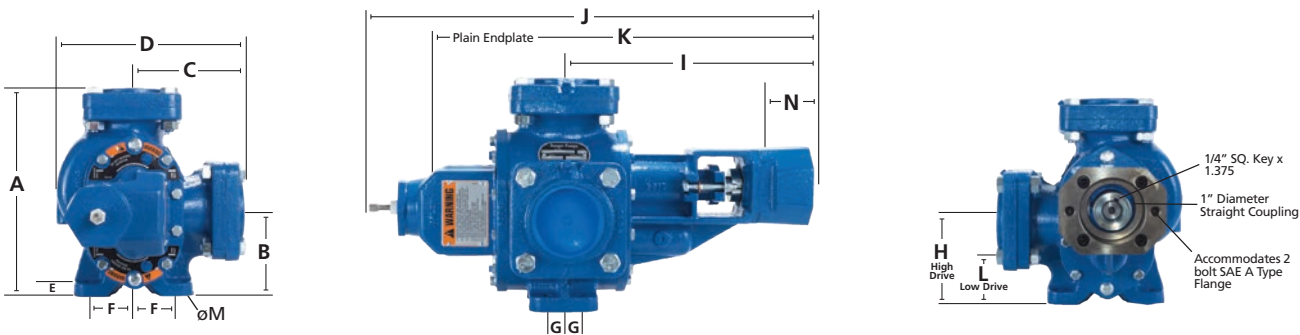
Series	RPM		250 RPM				290 RPM				360 RPM				380 RPM				445 RPM				545 RPM				750 RPM			
	PSI	SSU	30	100	1000	10,000	30	100	1000	10,000	30	100	1000	10,000	30	100	1000	10,000	30	100	1000	10,000	30	100	1000	10,000	30	100	1000	10,000
11	25	GPM	25	26	27	27	29	30	31	31	37	38	39	39	40	41	42	42	47	48	49		58	59	60		80	81	82	
		HP	.7	.7	.9	1.3	.9	.9	1.2	1.5	1.1	1.1	1.4	2.2	1.1	1.1	1.5	2.3	1.4	1.4	2.0		1.9	1.9	2.7		2.8	2.8	3.8	
	50	GPM	23	25	27	27	27	29	31	31	35	37	39	39	38	40	42	42	45	47	49		56	58	60		78	80	82	
		HP	1.1	1.1	1.3	1.7	1.3	1.3	1.5	1.9	1.7	1.7	2.0	2.8	1.7	1.7	2.1	2.9	2.1	2.1	2.6		2.7	2.7	3.5		3.9	3.9	4.9	
	100	GPM		23	26	27		27	30	31		35	38	39	33	38	41	42	40	45	48		51	56	59		73	78	81	
		HP		1.9	2.1	2.5		2.2	2.4	3.0		2.8	3.1	3.9	2.9	2.9	3.3	4.1	3.5	3.5	4.0		4.4	4.4	5.2		6.3	6.3	7.3	
125	GPM		22	26	27		26	30	31		34	38	39		37	41	42		44	48		48	55	59		70	77	81		
	HP		2.2	2.4	2.8		2.7	2.9	3.5		3.3	3.6	4.4		3.5	3.9	4.7		4.2	4.7		5.4	5.4	6.2		7.5	7.5	8.5		
17	25	GPM	38	40	41	42	45	47	48	49	57	59	60	61	60	62	63	64	71	73	74		88	90	91		123	125	126	
		HP	.8	.8	1.1	1.8	1.0	1.0	1.3	2.2	1.2	1.2	1.8	3.0	1.3	1.3	1.9	3.3	1.7	1.7	2.5		2.3	2.3	3.6		3.5	3.5	6.0	
	50	GPM	33	38	41	42	40	45	48	49	52	57	60	61	55	60	63	64	66	71	74		83	88	91		118	123	126	
		HP	1.4	1.4	1.7	2.4	1.6	1.6	1.9	2.8	2.1	2.1	2.7	3.9	2.3	2.3	2.9	4.3	2.9	2.9	3.7		3.8	3.8	4.9		5.4	5.4	7.9	
	100	GPM		34	40	41		41	47	48	49	53	59	60	52	56	62	63	63	67	73		80	84	90		115	119	125	
		HP		2.6	2.9	3.6		3.0	3.3	4.2	3.8	3.8	4.4	5.6	4.2	4.2	4.8	6.2	5.0	5.0	5.8		6.3	6.3	7.6		9.0	9.0	11.5	
125	GPM			39	41		46	48	49	51	58	60	60	52	54	61	63	63	65	72		80	82	89		115	117	124		
	HP			3.4	4.1		4.0	4.9	4.6	4.6	5.2	5.2	6.4	5.0	5.0	5.6	7.0	6.0	6.0	6.8		7.5	7.5	8.8		10.8	10.8	13.3		
22	25	GPM	52	53	55	55	60	61	63	63	76	77	79	79	80	81	83	83	94	95	97		116	117	119		162	163	165	
		HP	1.1	1.1	1.4	1.9	1.3	1.3	1.7	2.5	2.0	2.0	2.6	3.9	2.2	2.2	3.0	4.3	2.7	2.7	3.5		3.2	3.2	4.4		5.1	5.1	7.2	
	50	GPM	50	52	54	55	58	60	62	63	74	76	78	79	78	80	82	83	92	94	96		114	116	118		161	162	164	
		HP	2.0	2.0	2.3	2.8	2.3	2.3	2.6	3.4	3.1	3.1	3.7	5.0	3.3	3.3	4.1	5.4	4.1	4.1	4.9		4.8	4.8	6.0		7.3	7.3	9.4	
	100	GPM	44	50	53	55	52	58	61	63	68	74	77	79	72	78	81	83	86	92	95		108	114	117		154	160	163	
		HP	3.5	3.5	3.8	4.3	4.2	4.2	4.5	5.3	5.4	5.4	6.0	7.3	5.7	5.7	6.5	7.8	6.6	6.8	7.6		8.2	8.2	9.4		12.0	12.0	14.1	
125	GPM		49	53	55	50	57	61	63	66	73	77	79	70	77	81	83	84	91	95		106	113	117		152	159	163		
	HP		4.2	4.5	5.0	5.2	5.2	5.5	6.3	6.5	6.5	7.1	8.4	6.9	6.9	7.7	9.0	8.3	8.3	9.1		10.2	10.2	11.4		14.7	14.7	16.8		
48	RPM		203 RPM				235 RPM				270 RPM				309 RPM				360 RPM				410 RPM				609 RPM			
	PSI	SSU	30	100	1000	10,000	30	100	1000	10,000	30	100	1000	10,000	30	100	1000	10,000	30	100	1000	10,000	30	100	1000	10,000	30	100	1000	10,000
	25	GPM	94	97	101	103	111	114	118	120	129	132	136	138	149	152	156	158	176	179	183	185	202	205	209	211	305	308	312	314
		HP	2.5	2.8	3.2	3.8	3.0	3.4	3.9	4.6	3.7	3.9	4.7	5.7	4.4	4.7	5.7	6.9	5.4	5.9	7.0	8.5	6.3	6.8	8.4	10.3	10.9	12.0	16.8	19.7
	50	GPM			93	99		103	110	116		121	128	134	133	141	148	154	160	168	175	181	186	194	201	207	209	297	304	310
		HP			4.7	5.3		5.1	5.6	6.3		5.9	6.7	7.7	6.8	7.1	8.1	9.3	8.0	8.5	9.6	11.1	9.5	10.0	11.6	13.5	15.4	16.5	19.3	24.2
	100	GPM				88				105			123				132	143		159	170				185		196	266	288	299
		HP				8.5				10.0			11.1				12.7	13.9		15.1	16.6				17.7		19.6	25.6	28.4	33.3
	125	GPM								101								119	139		166				176		192	279	295	
		HP								11.7								14.0			16.2				19.2		22.7		32.9	37.3

11, 17, 22 SERIES - 90° PORTS

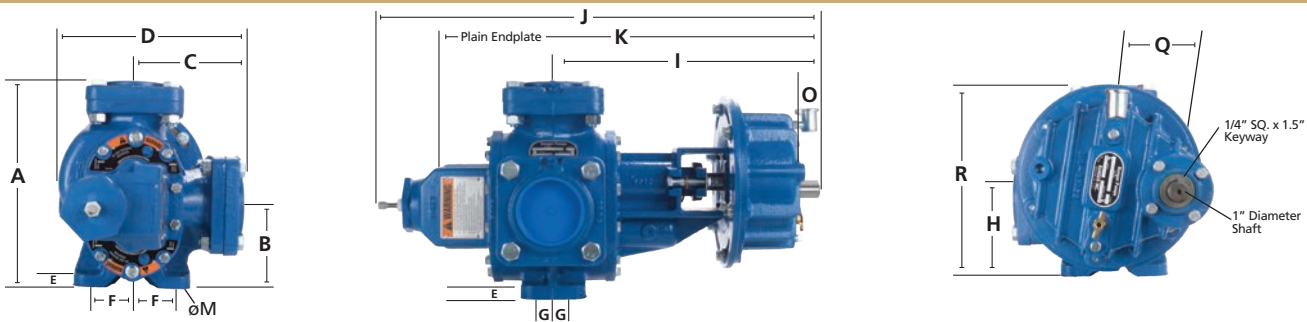
OUTBOARD BEARING - HB



HYDRAULIC - HH



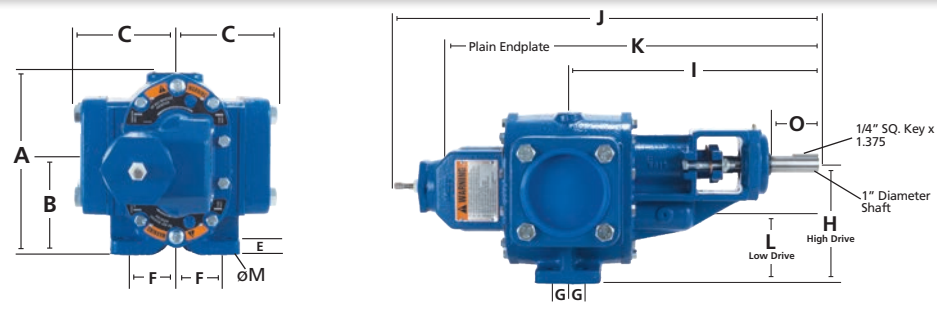
GEAR REDUCTION - GB



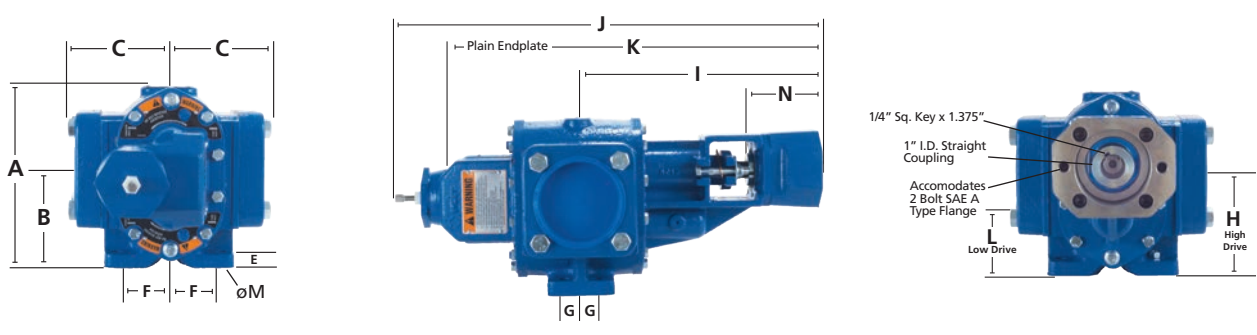
11, 17, 22 SERIES-90°			A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	Q	R	PORTS
119	HB & HBRV	in mm	10.75 273	5.00 127	3.63 92	7.63 194	0.75 19	2.75 70	0.88 22	6.44 164	13.50 343	22.88 581	21.25 540	3.65 93	0.56 14		3.75 95			2" NPT TAPPED
	HBF & HBFRV	in mm	11.52 51	5.00 127	4.30 109	8.30 211	0.75 19	2.75 70	0.88 22	6.44 164	13.50 343	22.88 581	21.25 540	3.65 93	0.56 14		3.75 95			2" NPT FLANGE STANDARD 2.5" NPT FLANGE OPTIONAL
	HH & HHRV	in mm	10.75 273	5.00 127	3.63 92	7.63 194	0.75 19	2.75 70	0.88 22	6.44 164	11.84 301	21.00 533	17.50 445	3.65 93	0.56 14	2.72 69				2" NPT TAPPED
	HHF & HHFRV	in mm	11.52 293	5.00 127	4.30 109	8.30 211	0.75 19	2.75 70	0.88 22	6.44 164	11.84 301	21.00 533	17.50 445	3.65 93	0.56 14	2.72 69				2" NPT FLANGE STANDARD 2.5" NPT FLANGE OPTIONAL
	GB & GBRV	in mm	10.75 273	5.00 127	3.63 92	7.63 194	0.75 19	2.75 70	0.88 22	6.44 164	14.81 376	23.88 607	20.52 521	3.65 93	0.56 14		1.75 44	3.52 89	11.63 295	2" NPT TAPPED
	GBF & GBFRV	in mm	11.52 293	5.00 127	4.30 109	8.30 211	0.75 19	2.75 70	0.88 22	6.44 164	14.87 376	23.88 607	20.52 521	3.65 93	0.56 14		1.75 44	3.52 89	11.63 295	2" NPT FLANGE STANDARD 2.5" NPT FLANGE OPTIONAL
179	HB & HBRV	in mm	10.75 273	5.00 127	3.63 92	7.75 197	0.75 19	2.75 70	0.88 22	6.44 164	13.71 348	23.63 600	22.00 559	3.65 93	0.56 14		3.00 76			2" NPT TAPPED
	HBF & HBFRV	in mm	11.63 295	5.00 127	4.25 108	8.25 210	0.75 19	2.75 70	0.88 22	6.44 164	13.71 348	23.63 600	20.12 511	3.65 93	0.56 14		3.00 76			2" NPT FLANGE STANDARD 2.5" NPT FLANGE OPTIONAL
	HH & HHRV	in mm	10.75 273	5.00 127	3.63 92	7.75 197	0.75 19	20.75 70	0.88 22	6.44 164	12.60 320	22.50 572	19.00 483	3.65 93	0.56 14	2.72 69				2" NPT TAPPED
	HHF & HHFRV	in mm	11.63 295	5.00 127	4.25 108	8.25 210	0.75 19	2.75 70	0.88 22	6.44 164	12.60 320	22.50 572	19.00 483	3.65 93	0.56 14	2.72 69				2" NPT FLANGE STANDARD 2.5" NPT FLANGE OPTIONAL
	GB & GBRV	in mm	10.75 273	5.00 127	3.63 92	7.75 197	0.75 19	2.75 70	0.88 22	6.44 164	15.54 395	25.36 644	22.00 559	3.65 93	0.56 14		1.75 44	3.52 89	11.63 295	2" NPT TAPPED
	GBF & GBFRV	in mm	11.52 295	5.00 127	4.30 108	8.30 210	0.75 19	2.75 70	0.88 22	6.44 164	15.54 395	25.36 644	22.00 559	3.65 93	0.56 14		1.75 35	3.52 89	11.63 295	2" NPT FLANGE STANDARD 2.5" NPT FLANGE OPTIONAL
229	HBF & HBFRV	in mm	12.25 311	5.00 127	6.50 165	11.00 279	0.75 19	2.75 70	0.88 22	6.44 164	14.50 368	25.00 635	21.50 546	3.65 93	0.56 14		3.00 76			3" NPT FLANGE STANDARD 4" NPT FLANGE OPTIONAL
	HHF & HHFRV	in mm	12.25 311	5.00 127	6.50 165	11.00 279	0.75 19	2.75 70	0.88 22	6.44 164	13.40 340	24.00 610	20.50 521	3.65 93	0.56 14	2.72 69				3" NPT FLANGE STANDARD 4" NPT FLANGE OPTIONAL
	GBF & GBFRV	in mm	12.25 311	5.00 127	6.50 165	11.63 295	0.75 19	2.75 70	0.88 22	6.44 164	16.38 416	27.00 686	23.50 597	3.65 93	0.56 14		1.75 44	3.52 89	11.63 295	3" NPT FLANGE STANDARD 4" NPT FLANGE OPTIONAL

11, 17, 22 SERIES - 180° PORTS

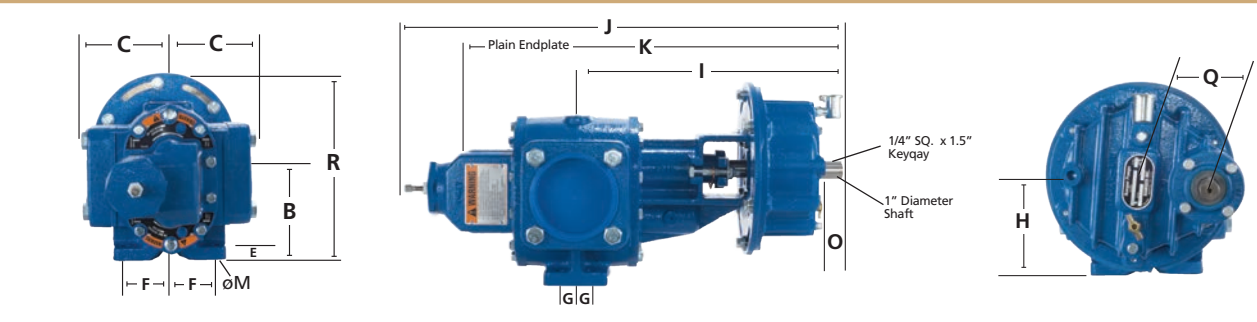
OUTBOARD BEARING - HB



HYDRAULIC - HH

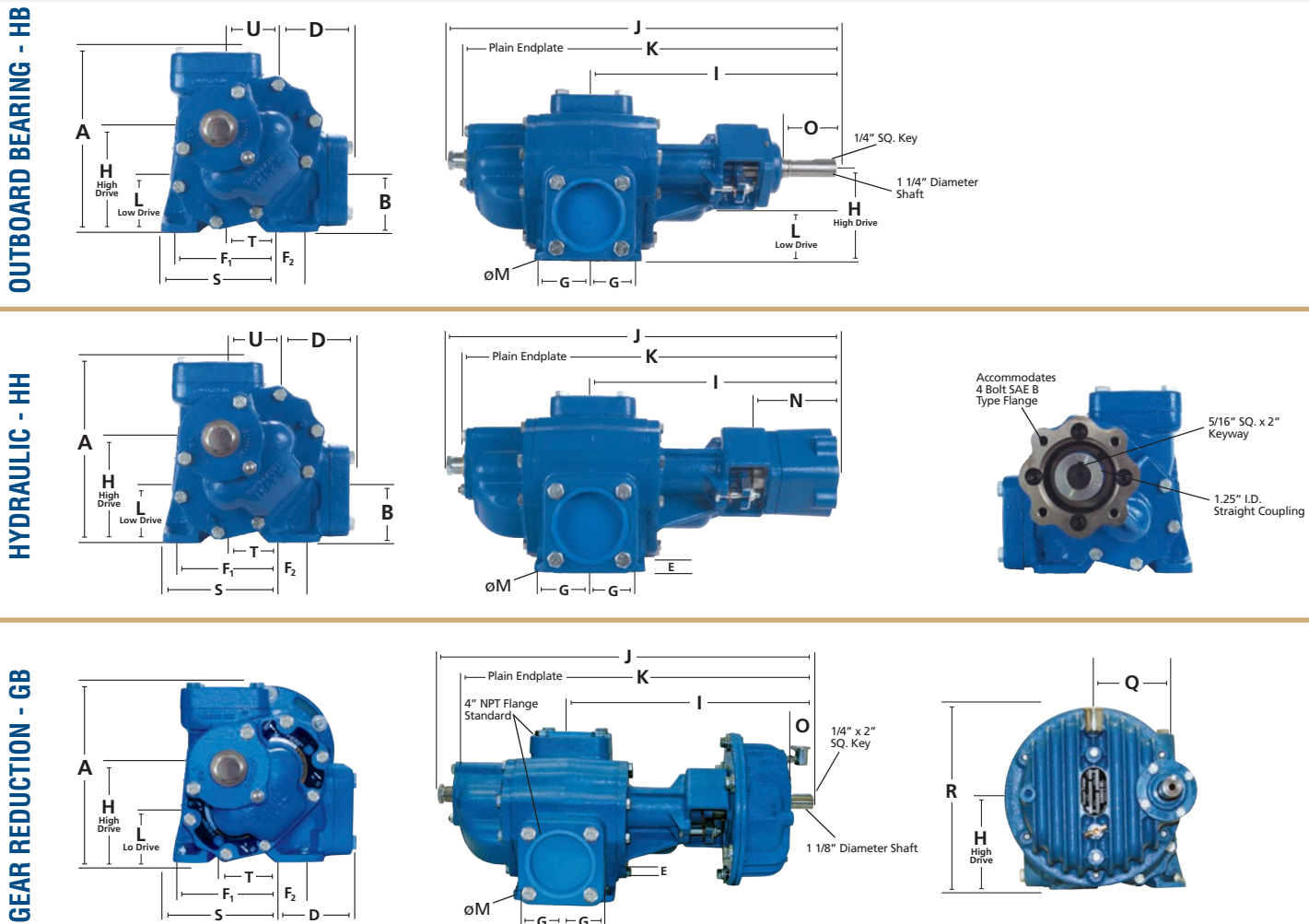


GEAR REDUCTION - GB



11, 17, 22 SERIES-180°			A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	Q	R	PORTS
118	HBF & HBFRV	in	9.50	5.00	4.14	8.28	0.75	2.75	0.88	6.44	13.50	22.88	21.25	3.65	0.56		3.75			2" NPT FLANGE STANDARD
		mm	241	127	105	210	19	70	22	164	343	581	540	93	14		95			
	HHF & HHFRV	in	9.50	5.00	4.14	8.28	0.75	2.75	0.88	6.44	11.84	21.00	17.50	3.65	0.56	2.72	2" NPT FLANGE STANDARD			
		mm	241	127	105	210	19	70	22	164	301	533	445	93	14	69				
	GBF & GBFRV	in	9.50	5.00	4.14	8.28	0.75	2.75	0.88	6.44	14.81	23.88	20.52	3.65	0.56		1.75	3.52	11.63	2" NPT FLANGE STANDARD
		mm	241	127	105	210	19	70	22	164	376	607	521	93	14		44	89	295	
178	HBF & HBFRV	in	9.50	5.00	4.89	9.78	0.75	13.71	0.88	6.44	13.71	23.63	20.12	3.65	0.56		3.00			3" NPT FLANGE STANDARD
		mm	241	127	124	248	19	348	22	164	348	600	511	93	14		76			
	HHF & HHFRV	in	9.50	5.00	4.89	9.78	0.75	2.75	0.88	6.44	12.60	22.50	19.00	3.65	0.56	2.72	3" NPT FLANGE STANDARD			
		mm	241	127	124	248	19	70	22	164	320	572	483	93	14	69				
	GBF & GBFRV	in	9.50	5.00	4.89	9.78	0.75	2.75	0.88	6.44	15.54	25.36	22.00	3.65	0.56		1.75	3.52	11.63	3" NPT FLANGE STANDARD
		mm	241	127	124	248	19	70	22	164	395	644	559	93	14		44	89	295	
228	HBF & HBFRV	in	9.44	5.00	4.75	9.50	0.75	2.75	0.88	6.44	14.50	25.00	21.50	3.65	0.56		3.00			4" NPT FLANGE STANDARD 3" NPT FLANGE OPTIONAL
		mm	240	127	121	241	19	70	22	164	368	635	546	93	14		76			
	HHF & HHFRV	in	9.44	5.00	4.75	9.50	0.75	2.75	0.88	6.44	13.40	24.00	20.50	3.65	0.56	2.72	4" NPT FLANGE STANDARD 3" NPT FLANGE OPTIONAL			
		mm	240	127	121	241	19	70	22	164	340	610	521	93	14	69				
	GBF & GBFRV	in	9.44	5.00	4.75	9.50	0.75	2.75	0.88	6.44	16.38	27.00	23.50	3.65	0.56		1.75	3.52	11.63	4" NPT FLANGE STANDARD 3" NPT FLANGE OPTIONAL
		mm	240	127	121	241	19	70	22	164	416	686	597	93	14		44	89	295	

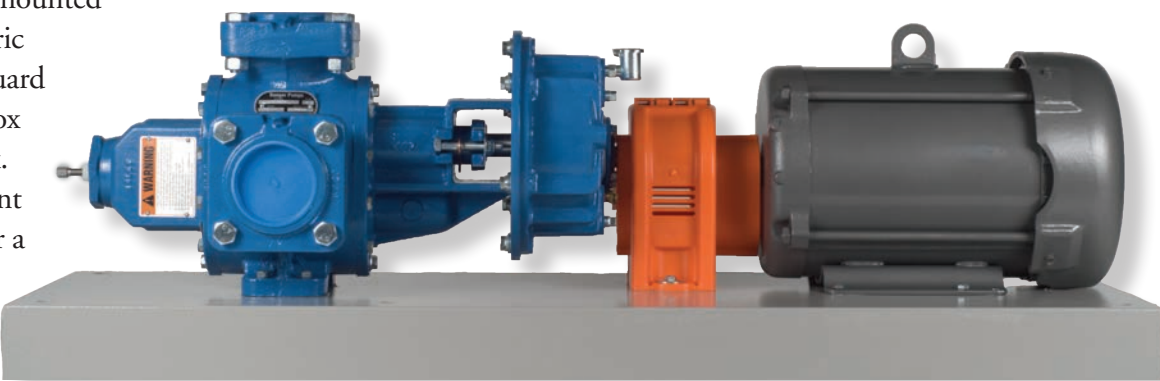
48 SERIES ANGLED GEAR PUMPS



489 ANGLED GEAR			A	B	D	E	F ₁	F ₂	H	I	J	K	L	M	N	O	Q	R	S	T	U	PORTS
489	HBF & HBFRV	in	11.54	3.15	5.53	0.63	6.09	1.90	6.40	17.55	28.00	27.25	3.75	0.75		4.08			6.89	2.65	3.25	4" NPT FLANGE STANDARD 3" NPT FLANGE OPTIONAL
		mm	293	80	140	16	155	48	163	446	711	692	95	19		104			175	67	83	
	HHF & HHFRV	in	11.54	3.15	5.53	0.63	6.09	1.90	6.40	16.35	27.00	26.00	3.75	0.75	3.75				6.89	2.65	3.25	
		mm	293	80	140	16	155	48	163	415	686	660	95	19	95				175	67	83	
	GBF & GBFRV	in	11.54	3.15	5.53	0.63	6.09	1.90	6.40	22.27	34.00	33.00	3.75	0.75		2.87	4.188	12.04	6.89	2.65		
		mm	293	80	140	16	155	48	163	566	864	838	95	19		73	106	306	175	67		

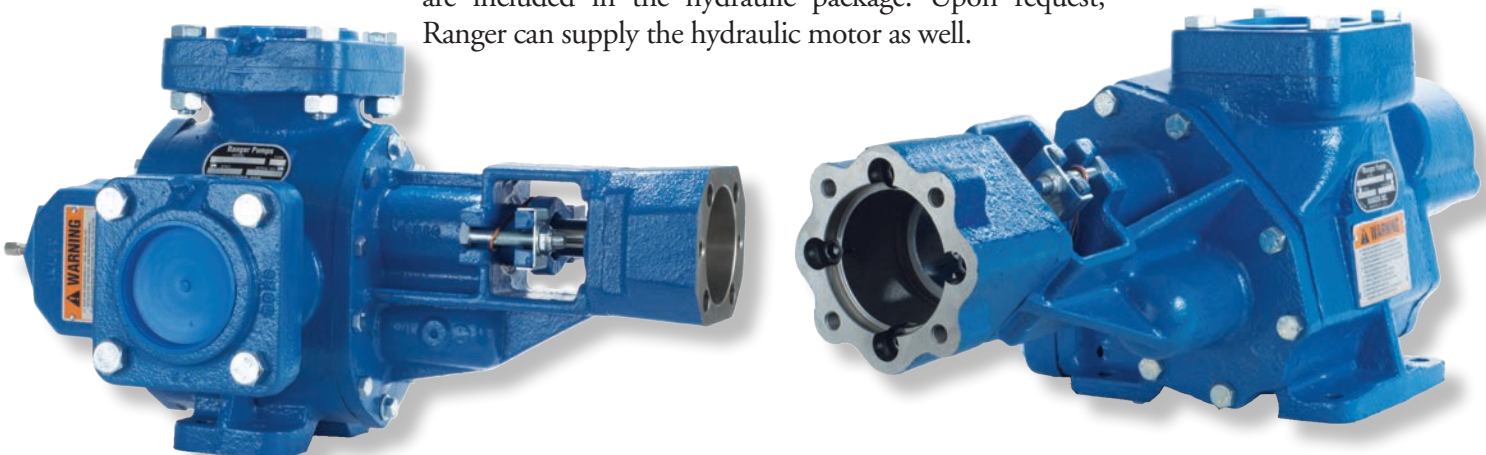
Mounted Pump Systems

Ranger pumps can be mounted on a base with an electric motor, coupling and guard with an integral gear box or stand alone gear box. There are many different options that can deliver a wide range of gallons per minute.



HYDRAULIC PUMPS

All of the Ranger 11, 17, 22 and 48 series pumps can be supplied with a hydraulic motor adaptor. The adaptor and rigid coupling to connect the pump and hydraulic motor are included in the hydraulic package. Upon request, Ranger can supply the hydraulic motor as well.




Identifying Direction of Rotation Mounting



Hi-Drive Pumps
W: Clockwise Rotation X: Counterclockwise Rotation Y: Clockwise Rotation Z: Counterclockwise Rotation

Lo-Drive Pumps
LW: Clockwise Rotation LX: Counterclockwise Rotation LY: Clockwise Rotation LZ: Counterclockwise Rotation

Pump Rotation
Pumping rotation is determined when facing the drive shaft. These diagrams will serve as a helpful basis for you to determine the direction of rotation wanted according to your piping system. *Example:* 

WARNING: Read installation, operation and maintenance Manual before installing, performing maintenance or operating a Ranger pump.

Company History

Ranger pumps are built in the USA from parts made in the USA. We are proud of our history of providing our customers with the highest quality helical gear pumps for over 20 years.

Ranger Pumps is a privately held corporation that was founded in 1989 in Memphis, Tennessee. The company has become a national supplier serving customers in all 50 states and numerous countries around the world.

Customer Service

We consider customer service to be a high priority. We are proud of the fact that when you call our offices you will talk to a knowledgeable representative who understands all aspects of our business, not a voice mail message.

Quality Assurance

All of our products are built to exacting standards and are tested to be sure they work before they go out the door.



Shipping

Memphis, Tennessee is a major distribution center hub in the United States. We are able to ship quickly with short lead times to virtually anywhere in the world.

Investing in Our Product

We are constantly adding new equipment and processes. We have recently added a state-of-the-art coordinate measuring machine that allows us to make more accurate parts, thus insuring a very high quality end product.

Made in the USA

We are extremely proud of the fact that all Ranger castings are poured and machined in the USA. All Ranger gears, shafts, bushings and packings are made in the USA. All major Ranger components are made in the USA.

Pumps Are Our Business

We specialize in the manufacture of precision helical gear pumps. Our vision is focused very closely on these specific products, outstanding customer service, with on-time delivery and excellent technical support.

Competitively Priced Products

Ranger pumps performance meets or exceeds the competition in every way. We are careful to be sure that our quality exceeds our competitors while providing an outstanding value on every pump we manufacture.



Ranger, Inc.